

**NATURAL RESOURCES CONSERVATION SERVICE
CONSERVATION PRACTICE GENERAL SPECIFICATIONS**

CONSERVATION CROP ROTATION

CODE 328

The following specifications must be met to ensure proper implementation of this practice. This will help obtain expected yields and the biomass production needed for erosion control and/or other objectives.

CROP VARIETIES:

Where available, crop varieties shall be selected that are resistant to disease and insect problems common to the area.

Seeding rates and planting dates should be in accordance with the conservation plan and meet the planned objectives.

Crop rotations selected must help control weed, insect and disease problems by interrupting pest life cycles.

Cover crops:

Cover crops selected to supplement insufficient residue shall have the properties needed for the intended purpose(s). These consist primarily of winter wheat or other small grains used primarily to protect the soil surface from wind and/or water erosion. These shall be planted early enough in the fall to be able to provide the necessary ground cover when needed. (See general specifications for Cover and Green Manure Crops.)

When insufficient amounts of crop residue for wind erosion control are produced, they shall be supplemented with mulch, manure or followed by a cover crop. Manure shall be tested for nutrients and salt content prior to application. (For manure application, see Waste Utilization Specifications.)

Cover crops such as irrigated wheat or rye shall be planted early enough in the fall following low residue crops such as vegetables, peanuts etc.

in order to provide the necessary protection from wind erosion.

Cover crops shall be killed 2-3 weeks prior to planting the next crop.

Crops planted to manage deficient or excess plant nutrients:

Crops that add nitrogen to the system include alfalfa, beans, and other legumes. Those that are considered nitrogen depleting crops may include cotton, sorghum, small grains, corn, non-leguminous vegetables etc.

SOIL IMPROVING VERSUS SOIL DEPLETING CROPS.

1. Soil Improving Crops: (See Table 1)

These are typically those crops which are capable of producing sufficient residue to provide for soil maintenance needs and overcome the negative effects of tillage and other practices on soil condition. Generally, these crops are fibrous rooted, leafy plants.

Row widths for high residue crops will not exceed 42 inches. Close spaced high residue crops planted with a drill will not exceed 12 inches. Forage crops (drilled), will not exceed a drill width of 20 inches.

2. Soil Depleting Crops: (See Table 1)

These are typically those crops which leave very little residue after harvest. They include tap rooted row crops such as cotton and chile. Although these crops can return much residue under irrigated conditions, the negative effect from the amount of tillage normally performed to produce the crops offsets benefits from the residue produced.

Conservation practice general specifications are reviewed periodically, and updated if needed. To obtain the current version, contact the Natural Resources Conservation Service.

Table 1

SOIL IMPROVING CROPS	SOIL DEPLETING CROPS ¹		
	Group A	Group B	Group C
Sainfoin	High residue crops harvested for silage	Potatoes	Chile
Alfalfa		Cotton (Upland)	Onions
Corn (Grain)		Cotton (Pima)	Lettuce
Grain Sorghum		Peanuts	Melons
Forage Sorghum (Graze or Hay)		Beans	
Grass		Soybeans	
Wheat		Sugar Beets	
Oats			
Barley			
Rye			
Millet			
Austrain Winter Peas			
Clover (all)			
Guar			
Sudangrass			
Vetch			

Operation and Maintenance:

In case of crop failure or shift in planting intentions for weather related or economic reasons, select substitute crops that have similar properties and meet the criteria for all the resource concerns identified for the field or treatment unit. (See Table 1 above)

¹ Group A: Crops that produce a large quantity of aboveground biomass that is harvested and an extensive root biomass.

Group B: Crops that produce a moderate quantity of aboveground biomass and a moderate to low quantity of root biomass.

Group C: Crops that produce a moderate to small quantity of aboveground bioamass that decomposes quickly and a small quantity of root biomass.